Image

1746

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Junji Kuyama et al.

Serial No.: 09/656,777

Filed: September 7, 2000

For: POSITIVE ELECTRODE ACTIVE MATERIAL FOR A NON-AQUEOUS ELECTROLYTE AND NON-AQUEOUS ELECTROLYTE CELL USING THE SAME

Case No.: 09792909-0409

Group Art Unit: 1746

Examiner: Monique M. Wills

Certificate of Mailing (37 CFR 1.8(a))
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to:

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Date of Deposit: April 7, 2004

Roxanne M. Swartz 4/7/04
Roxanne M. Swartz Date

TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed herewith is the Declaration Under 37 C.F.R. § 1.132 of Kuyama et al. in the above-identified patent.

Also enclosed are:

Return Receipt Postcard

The Commissioner is hereby authorized to charge any additional fees required, as well as any patent application processing fees associated with this communication for which full payment has not been tendered, to Deposit Account No. 19-3140. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

SONNENSCHEIN NATH & ROSENTHAL LLP

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Our File No. 09792909-0409

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Junji Kuyama et al.	
Serial No. 09/656,777	Examiner: Monique M. Wills
Filing Date: September 7, 2000	Group Art Unit No.: 1746
Title: POSITIVE ELECTRODE ACTIVE MATERIAL FOR A NON-AQUEOUS ELECTROLYTE AND NON-AQUEOUS ELECTROLYTE CELL USING THE SAME	

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir,

I, Junji Kuyama ("I" or "Affiant") hereby declares as follows:

1. I am one of the inventors of the subject matter of the above identified application.

2. I am currently an employee of Sony Corporation, which is also the sole assignee of the above-referenced patent application.

3. I have worked for Sony Corporation for over 6 years.

4. I have worked in the field of electrolyte batteries for over 10 years.

5. I have a degree in faculty of engineering from Kyoto University, received on March 31, 1991.

6. I have read the above identified application, including the presently active claims. I have also reviewed the office action mailed on July 15, 2003 and the applied references cited in the office action, including Miyasaka (U.S. Patent 5,869,208) and Tanno (U.S. Patent No. 5,853,918).

7. In a series of experiments carried out by myself, or under my supervision, it has been determined that a positive electrode active material comprising a lithium composite manganese oxide whose specifics surface area measured by the BET method is not less than 0.2 m^2/g and smaller than 2 m^2/g has certain advantageous characteristics. It had been observed that when the specific surface area of the lithium composite manganese oxide was smaller than 0.2 m^2/g, the high ratio discharge characteristic of the positive electrode active material was deteriorated, and when the specific surface area of the lithium composite manganese oxide was greater than 2 m^2/g, aggregation could not suppress the dissolving of the manganese.

8. The range which is provided in the specification of the above-identified application demonstrates substantially improved results, and these results are unexpected in light of the prior art (specifically Miyasaka and Tanno). Furthermore, these results are commercially significant, since using a positive electrode active material comprising a lithium composite manganese oxide whose specifics surface area measured by the BET method is not less than 0.2 m^2/g and smaller than 2 m^2/g allows for the high ratio discharge characteristic of the positive electrode active material to not be deteriorated and also allows for aggregation to suppress the dissolving of the manganese. Ultimately this permits one to produce a battery with improved characteristics. Finally, these results are commensurate in scope with the claims, since the experimental results would lead one of skill in the art to conclude that the results obtained would be expected for all positive electrode active materials comprising a lithium composite manganese oxide whose specifics surface area measured by the BET method falls within the scope of the present claims.

9. I hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Junji Kiuyama April 2. 2004

Name Date